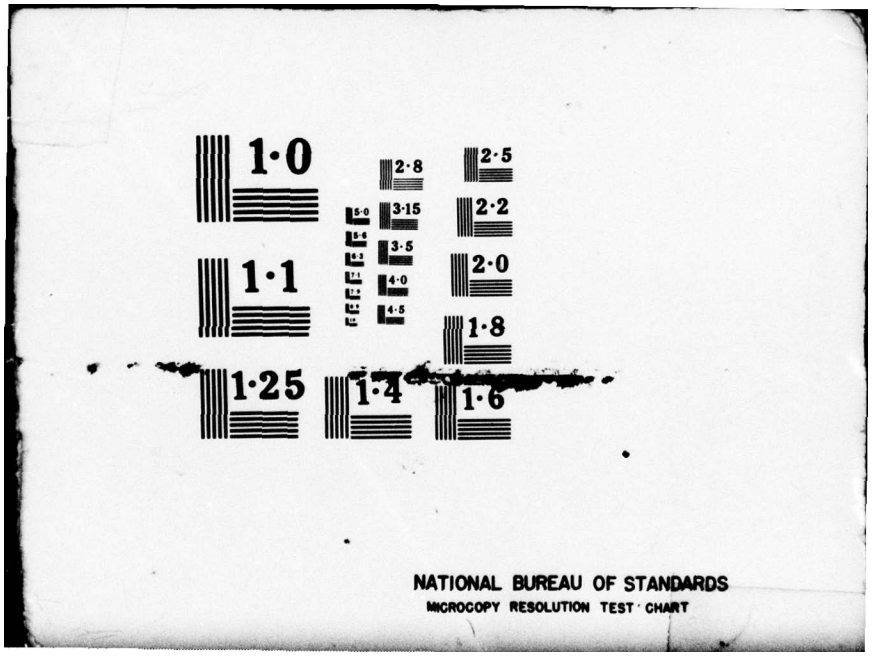
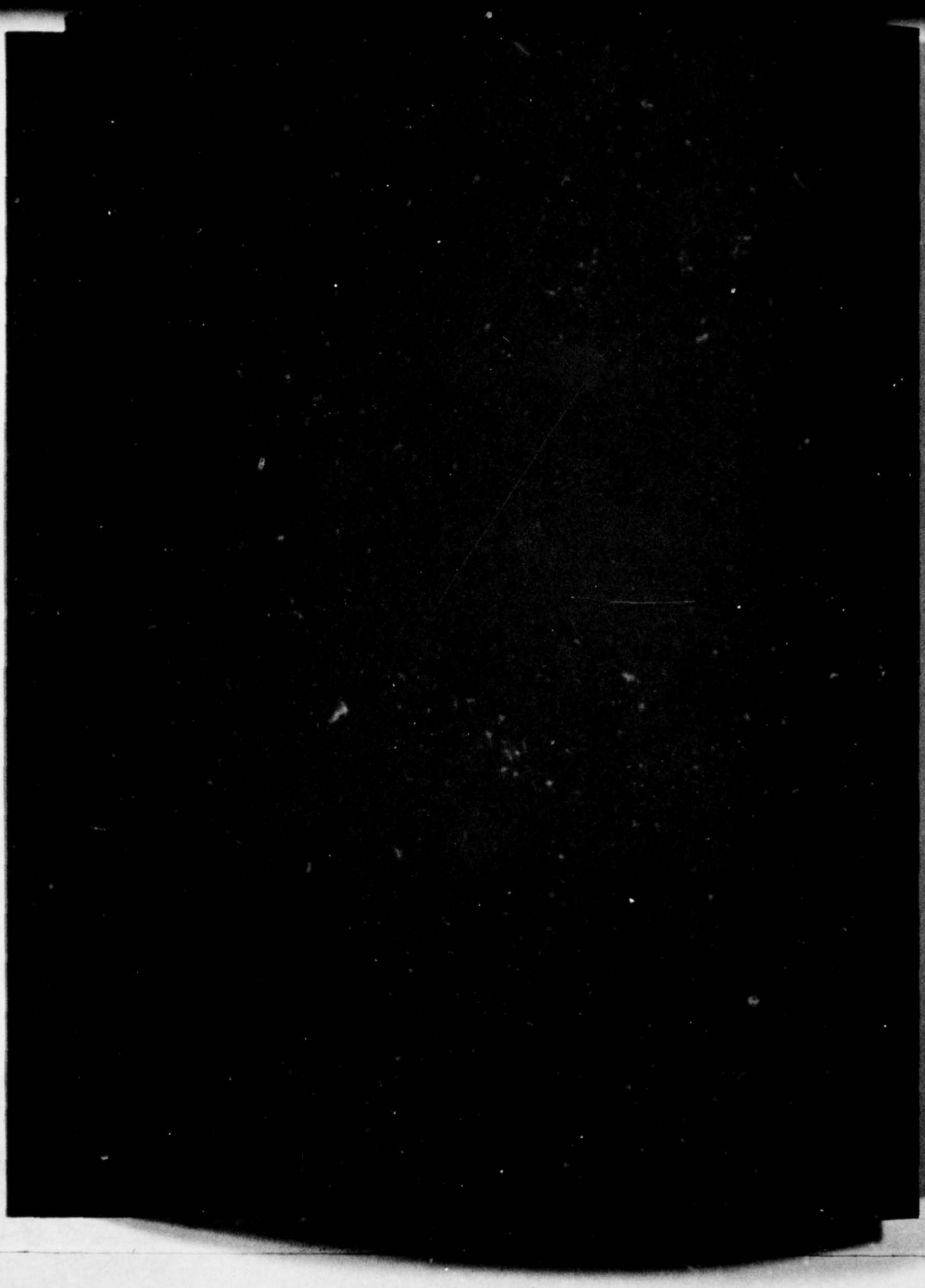
AD-A060 847 FEDERAL AVIATION ADMINISTRATION WASHINGTON D C OFFICE--ETC F/G 1/5
BIBLIOGRAPHY OF SELECTED PUBLICATIONS FOR AVIATION PLANNING IN --ETC(U)
JUL 78

UNCLASSIFIED FAA-ASP-78-4 NL

| OF |
ADA
080847

END
DATE
FILMED
1 -79
DDC


1·0
1·1
1·25
2·8
3·15
3·5
4·0
4·5
1·4
2·5
2·2
2·0
1·8
1·6
NATIONAL BUREAU OF STANDARDS
MICROCOPY RESOLUTION TEST CHART



Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
FAA-ASP-78-4 , FAA-ASP-210		
4. Title and Subtitle: Bibliography of selected publications for aviation planning in the terminal area.		5. Report Date: July 1978
		6. Performing Organization Code: ASP-210
7. Author(s)		8. Performing Organization Report No.
9. Performing Organization Name and Address: Federal Aviation Administration, Office of Aviation System Plans, 800 Independence Avenue, S.W., Washington, D. C. 20591		10. Work Unit No. (TRAIS)
		11. Contract or Grant No.
12. Sponsoring Agency Name and Address: Department of Transportation, Federal Aviation Administration, Washington, D. C. 20591		13. Type of Report and Period Covered
		14. Sponsoring Agency Code
15. Supplementary Notes		

16. Abstract

This publication has been prepared by the Planning Application Branch in the Office of Aviation System Plans, Federal Aviation Administration. Its purpose is to provide a listing of documents likely to be useful to persons engaged in aviation planning or decisionmaking particularly for planning on and around airports.

Documents are listed in eight categories: (1) Terminal Area Statistics; (2) Standards and Criteria; (3) Terminal Area Planning; (4) Forecasts; (5) Environmental Considerations; (6) Cost/Revenue Impact; (7) Models; and (8) General. Within each category, documents are listed alphabetically and each contains a brief synopsis.

17. Key Words	18. Distribution Statement
	This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161.

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	37	

FOREWORD

Good planning starts with the identification and collection of the information needed for informed decisions. Quite often, the planner either will spend resources developing data already available elsewhere or will do without, simply because he or she doesn't know where to find it.

This publication, "Bibliography of Selected Publications for Aviation Planning in the Terminal Area," has been prepared by the Planning Application Branch in the Office of Aviation System Plans, Federal Aviation Administration. Its purpose is to provide a listing of documents likely to be useful to persons engaged in aviation planning or decisionmaking, particularly for planning on and around airports.

Documents are listed in eight categories: (1) Terminal Area Statistics; (2) Standards and Criteria; (3) Terminal Area Planning; (4) Forecasts; (5) Environmental Considerations; (6) Cost/Revenue Impact; (7) Models; and (8) General. Within each category, documents are listed alphabetically and each contains a brief synopsis.

Documents were selected from sources within FAA, national aviation organizations (ATA, ALPA, AOPA, etc.), Other Government agencies (DOT, DOD, NASA, etc.), engineering firms, and State and local aviation organizations.

Some documents are available for sale to the public; others are available only in limited quantity and may be borrowed or inspected at libraries, public offices, or private organizations. The synopsis of each item includes the source of the document and, where known, the price.

> Prices shown are those in effect as of October 1, 1977. Prices are subject to change without notice and prices that will be charged on your order will be those in effect as of the date your order is processed.

Many of the publications listed are periodically revised, and the issue in the bibliography may not be the latest edition currently available. It is also highly likely that numerous items are not included in the bibliography which should be. It is our intention to update the bibliography periodically, adding items which are useful and removing items which are not.

For this reason, your evaluation of the effectiveness of this bibliography in meeting your information needs is earnestly solicited. Please submit any comments, suggestions, or criticism you have to offer to the Chief, Planning Application Branch, ASP-210; Federal Aviation Administration; 800 Independent Avenue, S.W.; Washington, D.C. 20591. Requests for additional copies may also be directed to that office.

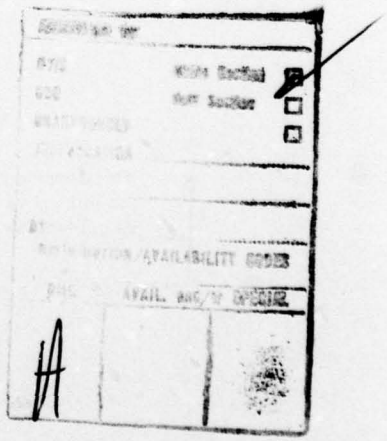


TABLE OF CONTENTS

AVAILABILITY CODE KEY

Code	Address
AIAA	American Institute of Aeronautics and Astronautics 750 Third Avenue New York, New York 10017
ALPA	Engineering and Safety Department Air Line Pilots Association, International 1625 Massachusetts Avenue, N.W. Washington, D.C. 20036
AOCI	Airport Operators Council International, Inc. 1700 K Street, N.W. Washington, D.C. 20006
AOPA	Aircraft Owners and Pilots Association Air Rights Building 7315 Wisconsin Avenue Washington, D.C. 20014
ATA	Air Transport Association of America 1709 New York Avenue, N.W. Washington, D.C. 20006
GPO	Superintendent of Documents Government Printing Office Washington, D.C. 20402
TRB	Transportation Research Board National Academy of Sciences 2101 Constitution Avenue, N.W. Washington, D.C. 20418
NASA	National Aeronautics and Space Administration 400 Maryland Avenue, S.W. Washington, D.C. 20546
NTIS	National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161
DOT	Department of Transportation, Facilities Management Branch, Publications & Forms Section, M-443.1 400 Seventh Street, S.W. Washington, D.C. 20590
FAA	Federal Aviation Administration Public Document Inspection Facility, Room 108 800 Independence Avenue, S.W. Washington, D.C. 20591

Regions:

Alaskan Region
Headquarters Building
632 Sixth Avenue
Anchorage, Alaska 99501

Central Region
Federal Building
601 East 12th Street
Kansas City, Missouri 64106

Eastern Region
Federal Building — Room 329
John F. Kennedy International Airport
Jamaica, New York 11430

Great Lakes Region
2300 East Devon
Des Plaines, Illinois 60018

New England Region
12 New England Executive Park
Burlington, Massachusetts 01803

Northwest Region
FAA Building, Boeing Field
Seattle, Washington 98108

Pacific-Asia Region
Room 808, 1833 Kalakaua Avenue
Honolulu, Hawaii 96815

Rocky Mountain Region
10455 East 25th Avenue
Aurora, Colorado 80010

Southern Region
3400 Whipple Street
East Point, Georgia 30344

Southwest Region
4400 Blue Mound Road
Fort Worth, Texas 76131

Western Region
1500 Aviation Boulevard
Hawthorne, California 90260

CHAPTER I — TERMINAL AREA STATISTICS

AIRPORT ACTIVITY STATISTICS OF CERTIFICATED ROUTE AIR CARRIERS
December 1976

This edition presents the volume of revenue passengers, freight, express, and mail traffic handled by the Nation's certificated route air carriers at each airport served by these airlines during the 12 months ended December 31, 1976. In addition, a presentation of aircraft departures is shown, including detail by aircraft type for total departures performed in scheduled, nonscheduled, and all services. This report is prepared jointly by the Civil Aeronautics Board (CAB) and the Department of Transportation/Federal Aviation Administration (FAA) and issued semiannually.

Availability: NTIS, #AD A046 953
Price: $3.00 Microfiche, $11.75 Paperback

AOPA AIRPORT DIRECTORY
Aircraft Owners and Pilots Association, 1978

The 1978 AOPA Airport Directory is a comprehensive reference book on the 13,193 landing sites in the United States and its territories. Included is information on whether an individual airport has: approved instrument approach, avionics repair service, airport identifier, VOR cross fixes, pattern altitudes, aircraft rental, flight instruction, and Flight Service Station (FSS) local call telephone number to obtain aviation weather information.

Availability: AOPA
Price: AOPA Members $4.75, Nonmembers $7.50

CENSUS OF U.S. CIVIL AIRCRAFT
DOT/FAA/Office of Management Systems, 1975

This document contains historical series and an annual count of all registered aircraft in the United States.

Availability: NTIS, #AD A033 210
Price: $13.00

COMMUTER AIR CARRIER OPERATORS AS OF SEPTEMBER 1976
DOT/FAA/Office of Management Systems/Information and Statistics Division

This report contains data received from commuter air carrier operators who reported activity data to CAB during the quarter ending September 30, 1976. This report is prepared annually.

Availability: NTIS, #AD A027 835
Price: $4.50

CURRENT AVIATION STATISTICS—AIR TRAFFIC ACTIVITY—TERMINAL AREA RELATIONSHIPS, FY 1976
DOT/FAA/Office of Management Systems/Information and Statistics Division, March 1977

The current study of terminal area airport operations encompasses FY 1976 data for 415 airports at which FAA traffic control towers operated the entire 12-month period. These are presented in two primary groups: Air Commerce Airports and General Aviation Airports.

Availability: NTIS, #AD A038 847
Price: $5.25

FAA AIR TRAFFIC ACTIVITY—FISCAL YEAR 1977
DOT/FAA/Office of Management Systems, September 1977

This publication furnishes terminal and en route air traffic activity information of the National Airspace System for FY 1977. This report is prepared annually.

Availability: FAA

FAA STATISTICAL HANDBOOK OF AVIATION—1976
DOT/FAA/Office of Management Systems, December 1976

This handbook is published annually. This edition contains data on major civil aviation activities for the period ended December 31, 1976.

Availability: NTIS
Price: $9.00

GENERAL AVIATION ACTIVITY SURVEY—1975
DOT/FAA/Office of Management Systems, September 1976

This is a study of the 1975 general aviation activity survey. Based upon an analysis of the data produced, this survey contains a flight profile of general aviation aircraft in terms of average trip length, average occupancy or load factor, and types of flight plans by aircraft type as well as by kind of flying.

Availability: FAA

MILITARY AIR TRAFFIC ACTIVITY REPORT, CALENDAR YEAR 1976

DOT/FAA/Office of Management Systems/Information and Statistics Division

This document contains listings of aviation activities at U.S. Air Force, Army, and Navy aviation facilities for CY 1976. This report is prepared annually.

Availability: FAA

PROFILES OF INTERNATIONAL PASSENGERS AT U.S. AIRPORTS—1976

DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, Report FAA-AVP-77-27, April 1977

This report deals with international travel at U.S. airports. The airports studied are those at which international travelers cleared U.S. customs inspection during 1976. It should be noted that travel to Canada, Bermuda, and the Caribbean are not included in this report. This was done to focus attention on long-haul travel. The numbers of travelers shown in this report are for both arriving and departing international passengers.

Availability: NTIS, #AD A041 304
Price: $11.75

PROFILES OF SCHEDULED AIR CARRIER DEPARTURE AND ARRIVAL OPERATIONS FOR TOP 100 U.S. AIRPORTS

DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, August 1976

This report provides data on total scheduled air carrier operations by hour of the day for Friday, August 6, 1976, for the top 100 airports within the 50 states, the District of Columbia and Puerto Rico. Published annually.

Availability: FAA

PROFILES OF SCHEDULED AIR CARRIER OPERATIONS BY STAGE LENGTH FOR FAA REGIONS AND TOP 100 U.S. AIRPORTS

DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, August 1976

The first section of this report provides data on total scheduled air carrier aircraft operations by trip length by hour of the day for August 6, 1976, for the top 100 airports within the 50 states of the U.S. and District of Columbia. The second section shows the same information for each of the 11 Federal Aviation Administration regions. The FAA regional information is for those airports in the regions that are included in the top 100 airports. Published annually.

Availability: FAA

PROFILES OF SCHEDULED AIR CARRIER PASSENGER TRAFFIC FOR TOP 100 U.S. AIRPORTS—AUGUST 6, 1976, Report FAA-AVP-77-30

Transportation Systems Center, Cambridge, Massachusetts, for FAA/Office of Aviation Policy, July 1977

Provides data for passenger traffic on scheduled air carrier services departing and arriving the top 100 airports within the 50 states and the District of Columbia. Enplanement and deplanement data are displayed by class of service by hour of the day for Friday, August 6, 1976. The selection of the top 100 airports was based on the total number of 1973 passenger enplanements in domestic and international service. Published annually.

Availability: FAA

STATISTICAL METHODS FOR MEASURING AERONAUTICAL ACTIVITY AT NONTOWERED AIRPORTS

Systems Consultants, Inc., Management and Data Systems Division, McLean, Virginia, for the FAA under Contract DOT FA71WA-2774, January 1973

This report summarizes a study of methods for estimating traffic activity at nontowered airports.

Availability: NTIS, #AD-758238
Price: $6.50

TOWER AIRPORT STATISTICS HANDBOOK—CALENDAR YEAR 1976

Advanced Technology, Inc., for DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-35

Full year 1976 daily aircraft operations were obtained from 419 towered airports (418 operated by FAA). The purpose of this report was to use a package of computer programs to perform statistical analyses on six user types of daily operations as reported on FAA Form 7230-1, Airport Traffic Record. The output of the computer programs displays specific statistics in tabular and graphical format. The tabular statistics include means, standard deviations and peak occurrences computed for individual airports as well as various multiple airport groupings. Frequency distribution histograms and time curves are presented in a graphical format for the entire nationwide set of FAA towered airports.

Availability: NTIS, #AD A025 316
Price: $16.50

1976 U.S. CIVIL AIRMEN STATISTICS
DOT/FAA/Ofice of Management Systems

The U.S. Civil Airmen Statistics is an annual study published to meet the demands of FAA, other government agencies, and industry for more detailed airmen statistics than those published in other FAA reports. Statistics pertaining to airmen, both pilot and non-pilot, were obtained from the official airman certification records maintained at the FAA Aeronautical Center, Oklahoma City, Oklahoma.

Availability: NTIS, #AD A041 568
Price: $4.50

CHAPTER II — STANDARDS AND CRITERIA

AIRPORT APRONS
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5335-2, January 27, 1965

Provides the criteria for airport aprons which are acceptable in accomplishing a project meeting the eligibility requirements of the Federal-aid to Airports Program.

Availability: DOT

AIRPORT CAPACITY CRITERIA USED IN LONG-RANGE PLANNING
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5060-3A, December 24, 1969

This circular outlines the method used by the FAA for determining the appropriate practical hourly and practical annual capacities of various airport runway configurations.

Availability: DOT

AIRPORT CAPACITY CRITERIA USED IN PREPARING THE NATIONAL AIRPORT PLAN
DOT/FAA/Office of Airports Programs (AAP-560), Advisory Circular 150/5060-1A, July 8, 1968

This circular presents the capacity methodology used by the FAA for determining when additional runways, taxiways, and aprons should be recommended in the National Airport Plan.

Availability: DOT

AIRPORT CARGO FACILITIES
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5360-2, April 6, 1964

Provides guidance material on air cargo facilities.

Availability: DOT

AIRPORT DESIGN STANDARDS—AIRPORTS SERVED BY AIR CARRIERS
DOT/FAA/Office of Airports Programs (AAP-560), Advisory Circular 150/5335-4, June 21, 1975

This circular provides criteria on runway geometrics for airports served by certificated route air carriers with present airplanes and those anticipated in the near future.

Availability: DOT

AIRPORT DESIGN STANDARDS, GENERAL AVIATION AIRPORTS, BASIC AND GENERAL TRANSPORT
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5300-6, July 14, 1969; consolidated reprint August 1975 incoporates changes 1 and 2

Provides recommended design criteria for the development of larger than general utility airports.

Availability: DOT

AIRPORT DESIGN STANDARDS—SITE REQUIREMENTS FOR TERMINAL NAVIGATIONAL FACILITIES
DOT/FAA, Advisory Circular 150/5300-2C, September 21, 1973

This advisory circular provides information regarding the location, function, and siting requirements of terminal air navigation facilities to enable sound airport design and development, as well as facilitating their proper and economical establishment.

Availability: DOT

AIRPORT DEVELOPMENT AID PROGRAM (ADAP) AUTHORITY, PROGRAM POLICY, ELIGIBILITY, AND ALLOWABILITY CRITERIA (BOOK 1)
DOT/FAA/Office of Airports Programs, Order 5100.17, August 25, 1971

This order sets forth the programming policies and guidelines for implementation of the Airport Development Aid Program (ADAP).

Availability: FAA

AIR TRAFFIC CONTROL STAFFING STANDARD SYSTEM
DOT/FAA/Air Traffic Service, Order 1380.33A, June 4, 1975

This order contains the engineered staffing standards for Air Route Traffic Control Centers, Air Traffic Control Terminals, and Flight Service Stations.

Availability: FAA

AIRWAY PLANNING STANDARD NUMBER ONE—TERMINAL AIR NAVIGATION FACILITIES AND AIR TRAFFIC CONTROL SERVICES

DOT/FAA/Office of Aviation System Plans, Order 7031.2B, September 20, 1974

This order contains criteria for the establishment of the various terminal air navigation facilities (i.e., ATCT, ASR, ATIS, ILS/ALS, PAR, REIL, and VASI) and air traffic control services provided by the agency and funded through the facilities and equipment (F&E) appropriation.

Availability: FAA

AIRWAY PLANNING STANDARD NUMBER TWO—AIR ROUTE TRAFFIC CONTROL

DOT/FAA/Office of Aviation System Plans, Order 7031.3, September 4, 1974

This order contains criteria for the establishment and discontinuance of en route facilities (ARTCC, VOR, VORTAC, ARSR, DF, and TWEB).

Availability: FAA

AIRWAY PLANNING STANDARD NUMBER FOUR—LEASED AIR TRAFFIC CONTROL COMMUNICATIONS SERVICES

DOT/FAA/Air Traffic Service, Order 7031.4c, August 4, 1975

This order provides criteria for establishing and discontinuing leased communications services, establishes orderly and adequate methods of maintaining records of leased services, and establishes periodical revalidation of the requirements for leased services.

Availability: FAA

DESIGN PRINCIPLES FOR DECENTRALIZED TERMINALS

Dr. Ing Heinz Peter Piper, Flughafen Hannover-Langenhagen Gmbh Co., 1974

An extract from a study published in the German Airport Association's scientific series. A summary of the development of readily manageable design methods for the facilities used to handle traffic between the curbside and the aircraft so that all these facilities can be matched to one another in efficiency.

Availability: AOCI

PLANNING AND DESIGN CRITERIA FOR METROPOLITAN STOL PORTS

DOT/FAA/Office of Airports Programs, Advisory Circular 150/5300-8, November 5, 1970

An outline of the basic physical, technical, and public interest factors which should be considered in planning and establishing metropolitan STOL ports.

Availability: DOT

RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN

DOT/FAA/Office of Airports Programs, Advisory Circular 150/5325-4, April 5, 1965; consolidated 1977 includes changes 1 through 11; change 12 dated July 27, 1977

Presents aircraft performance curves and sets forth standards for the determination of runway lengths to be provided at airports. The use of these standards is required for project activity under the Federal Aid to Airports Program when a specific critical aircraft is considered as the basis for the design of the runway.

Availability: DOT

STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS

DOT/FAA/Office of Airports Programs, Advisory Circular 150/5370-10, October 24, 1974; change 1 dated May 31, 1977

Provides construction standards usually used to specify grading, drainage, paving, lighting, fencing, and turfing items of work on civil airports.

Availability: GPO #050-007-00264-5
Price: $7.25

UNITED STATES STANDARD FOR TERMINAL INSTRUMENT PROCEDURES (TERPS)

DOT/FAA/Flight Standards Service, Order 8260.3B, July 1976

This handbook contains criteria which shall be used to formulate, review, approve, and publish procedures for instrument approach and departure of aircraft to and from civil and military airports. These criteria are for application at any location over which an appropriate United States agency exercises jurisdiction.

Availability: FAA

UTILITY AIRPORTS—AIR ACCESS TO NATIONAL TRANSPORTATION

DOT/FAA/Office of Airports Programs, Advisory Circular 150/5300-4B, June 24, 1975; consolidated reprint incorporates change 1

Establishes design standards for utility airports which are constructed for and intended to be used by propeller-driven aircraft of 12,500 pounds maximum gross weight or less.

Availability: DOT

CHAPTER III — TERMINAL AREA PLANNING

AIRLINE INDUSTRY SURVEY OF AIRPORTS
Air Transport Association of America, 1975

This is the eleventh edition of the Airline Industry Survey of Airports and states the scheduled airlines' known requirements through Fiscal Year 1980. Ten separate volumes have been prepared for the FAA Eastern, New England, Great Lakes, Central, Southern, Southwest, Rocky Mountain, Northwest, Western, and Pacific-Asia Regions. The survey for the FAA Alaskan Region is developed separately.

Availability: ATA

AIRPORT ACCESS—A PLANNING GUIDE
DOT/Federal Highway Administration, Transmittal 113, Volume 20, Appendix 55, October 1971

This discussion of airport access planning is based on experience gained in the Baltimore-Washington Airport Access Study. This planning guide is not a detailed manual for airport access planning. It does provide useful insight into judgmental factors involved in the planning process.

Availability: DOT

AIRPORT GROUND ACCESS, Report of the Secretary of Transportation to the United States Senate Committee on Appropriations pursuant to Senate Report No. 95-268

Identifies solutions to access problems and projects for consideration by local public bodies and planning authorities.

Availability: FAA

AIRPORT LAND BANKING
DOT/FAA/Office of Aviation System Plans, FAA Report #ASP-77-7, August 1977

The report assesses the potential of land banking as a means of ensuring the future availability of land for airport development through the year 2000. The analysis considers alternatives to airport development and land banking, land banking precedents, the legal issues and the economics of land banking, its advantages and disadvantages, airport financial capability, and alternative programming methods.

Availability: NTIS, #AD A046 475
Price: $5.25

AIRPORT LANDSIDE CAPACITY, SPECIAL REPORT 159
Transportation Research Board, National Academy of Sciences, 1975

Proceedings of a conference held April 28–May 2, 1975, in Tampa, Florida, sponsored by the Transportation Systems Center and Federal Aviation Administration.

Availability: TRB

AIRPORT MASTER PLANS
DOT/FAA/Airports Service, Advisory Circular 150/5070-6, February 1971

Provides guidance for the preparation of individual airport master plans.

Availability: GPO #050-008-00004-5
Price: $3.00

AIRPORT MASTER PLANS
Various airport sponsors

An airport master plan presents the planning conception of the ultimate development of a specific airport. It presents the research and logic from which the plan was evolved and contains the plan in graphics and text, including schedules, priorities, alternatives, and backup data. Since 1970, master plans have been prepared under the FAA Planning Grant Program. Contact FAA Office of Airports Programs (AAP-440) for specific listings.

AIRPORT TERMINAL BUILDING DEVELOPMENT WITH FEDERAL PARTICIPATION
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5360-6, October 5, 1976

Provides guidance pertaining to Federal participation in airport terminal building construction under the provisions of the Airport and Airway Development Act of 1970, as amended.

Availability: DOT

AIRPORT TRAVEL SURVEY MANUAL
Barton-Aschman Associates, Inc., Chicago, Illinois, for the DOT/Federal Highway Administration, July 1973

This document presents guidelines for the collection of data describing travel patterns and trip-marker characteristics of movements to and from airports. The manual describes survey techniques for measuring the use of land demand for ground transportation services.

Availability: DOT

ALPA GUIDE FOR AIRPORT STANDARDS, SECOND EDITION 1975
ALPA Airport Committee

This is a comprehensive guide which covers airports used by turbojet aircraft in airline operations.

Availability: ALPA

ANALYSIS OF RUNWAY OCCUPANCY TIMES AT MAJOR AIRPORTS
Prepared by MITRE Corporation for DOT/FAA/Office of Systems Engineering Management, Report #FAA-EM-78-9, May 1978

This report identifies specific causes of longer runway occupancy times as they relate to airline, exit, aircraft, runway and airport. It also identifies what potential short-term improvement might be expected at particular runways given an appropriately motivated environment.

Availability: NTIS
Price: $5.25

THE APRON-TERMINAL COMPLEX (Analysis of Concepts for Evaluation of Terminal Buildings)
Ralph M. Parsons Company in association with the Air Transport Association for the FAA, Report #FAA-RD-73-82, September 1973

Describes the principal considerations in the planning of airport apron-terminal areas. Apron-terminal area is defined by contract as that area limited by the curb on the landside and the taxiway access on the airside. Major functional areas are defined: curb, terminal, connector, and apron. Four principal concepts—pier, satellite, linear, and transporter—are analyzed and evaluated for suitability to specific situations.

Availability: NTIS, #AD-771186
Price: $7.25

CITIZEN PARTICIPATION IN AIRPORT PLANNING
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5050-4, September 5, 1976

Offers guidance for citizen involvement in airport planning. It is intended as a guide for airport sponsors, planners, and interested citizens in achieving citizen participation in airport planning studies.

Availability: DOT

COMMUNITY VALUES IN THE PLANNING AND EVALUATION OF AIRPORT DEVELOPMENT PROJECTS
Urban Systems Research and Engineering, Inc., Cambridge, Massachusetts, for DOT/FAA/Office of Aviation Policy and Plans, Report #FAA-AV-72-2, January 1972

This report presents the results of the first phase of an investigation of ways to incorporate community values into the air transport planning process. It considers the current structure and process of air transport planning and a number of cases of controversy between air planners and dissatisfied groups and evaluates the variety of suggested methods for altering the current structure and processes to make them more responsive to community values.

Availability: NTIS, #AD-747914
Price: $7.25

ESTABLISHMENT OF NEW MAJOR PUBLIC AIRPORTS IN THE UNITED STATES
DOT/FAA/Office of Aviation System Plans, FAA Report #ASP-77-3, August 1977

This report assesses needs for major new airports in the United States through the year 2000. Potential airport locations, the general size requirement of new airports, financing, and airport development issues and problems are also analyzed under a variety of future conditions.

Availability: NTIS, #AD A046 462
Price: $6.00

FAA REGIONAL AVIATION SYSTEM PLANS
DOT/FAA/various regions

Similar to the National Aviation System Plan, but smaller in scope, these plans are prepared by the FAA regions to document aviation plans, programs, and requirements in the individual regions during the next 10 years. The regional plans are not necessarily identical in format to each other, but generally cover the same subjects as the National Aviation System Plan.

Availability: FAA Regions

FAA REPORT ON AIRPORT CAPACITY
MITRE Corporation/FAA, Office of Systems Engineering Management, Report #FAA-EM-74-5, Vols. I and II, January 1974

Study by the MITRE Corporation and FAA analyzes the impact of FAA programs on airport capacity over the next 10 years. Volume I, National Summary, is a summary of the findings; Volume II presents a detailed examination of each of the eight selected airports.

Availability: Volume I, NTIS, #AD-774784
Volume II, NTIS, #AD-774789
Price: Volume I, $6.00
Volume II, $11.00

NATIONAL AIRPORT SYSTEM PLAN—1978-1987
DOT/FAA/Office of Airports Programs

The 1978 National Airport System Plan (NASP) provides a compilation of development needs for the Nation's Civil Airports in the decade ahead. The latest NASP has incorporated the 12 previous volumes (covering all regions) into one document.

Availability: Distribution points and FAA Headquarters and Regions; also for sale by GPO.

THE NATIONAL AVIATION SYSTEM—CHALLENGES OF THE DECADE AHEAD—1977-1986

This plan consists primarily of the funding and scheduling of programs needed to meet realistic requirements of aviation for the next decade.

Availability: DOT

OFFSHORE AIRPORTS
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5370-5A, February 21, 1975

Announces to the public the availability of a two-volume report on offshore airport planning and construction methods and how to obtain the report.

Availability: DOT

PARAMETERS OF FUTURE ATC SYSTEMS RELATING TO AIRPORT CAPACITY/DELAY
Prepared by MITRE Corporation for DOT/FAA/Office of Systems Engineering Management, Report No. FAA-EM-78-8, April 1978

The FAA, in conjunction with users of the major airports, is conducting a series of site specific case studies as to how to increase airport capacity—both now and in the future when the products of the FAA Engineering and Development Program have been implemented as part of the operational ATC system. This document presents estimates of changes in longitudinal spacing on final approach that may be realized as the products of the E&D programs become available.

Availability: NTIS
Price: $4.00

PLANNING AND DESIGN CONSIDERATION FOR AIRPORT TERMINAL BUILDING DEVELOPMENT
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5360-7, September 4, 1976

Presents planning and design procedures to be considered in airport terminal building development funded under the Airport and Airway Development Act of 1970, as amended.

Availability: DOT

THE PLANNING GRANT PROGRAM FOR AIRPORTS
DOT/FAA/Advisory Circular 150/5900-1A, AAP-440, September 26, 1974

Guidance to the sponsors of the airport system plans and airport master plan on how to participate in the FAA's Planning Grant Program (PGP). Describes the application process and the administrative procedures to be followed in performing planning projects.

Availability: DOT

PLANNING THE METROPOLITAN AIRPORT SYSTEM
Joint Committee of the FAA and Airport Operators Council International in cooperation with the Department of Housing and Urban Development and the Federal Highway Administration, Advisory Circular 150/5070-5, May 1970

A representation of the aviation facilities required to meet the immediate and future air transportation needs of the metropolitan area. Relates airport system planning to the policy and coordinative planning for the area, and particularly to ground transportation, land-use planning, and the urban environment.

Availability: GPO, Stock #050-008-00003-7
Price: $1.65

PLANNING THE STATE AIRPORT SYSTEM

Joint Committee of the FAA and the National Association of State Aviation Officials, Advisory Circular 150/5050-3A, June 1972

Provides general guidance in preparing a state airport system plan. Applicable to preparing state airport system plans under the FAA-administered Planning Grant Program (PGP).

Availability: GPO, Stock #050-007-00184-3
Price: $2.50

RESEARCH CONCEPT OF AN AIRPORT/INDUSTRIAL CITY

United Aircraft Research Laboratories, Report No. J-970822-2, April 1970

A study performed under the sponsorship of the Connecticut Research Commission. Concept involves development of a large new airport away from existing cities and use of surrounding land for industrial use. Presented as one answer to increasing opposition to airport development in urban areas. Includes discussion of air traffic demand, environmental considerations, access, and development of residential areas.

Availability: United Aircraft Research Laboratories
United Aircraft Corporation
East Hartford, Connecticut

STATE AND METROPOLITAN/REGIONAL PLANS

In addition to airport master plans, the FAA Planning Grant Program supports the development of state and metropolitan area airport system plans. These plans are a representation of the aviation facilities needed to meet the immediate and future air transportation needs and to meet the overall goals of the state or metropolitan area. They include consideration of new airports and expansion or role change of existing ones, showing proposed schedules, costs, and other planning data over a planning period of abut 20 years. As of June 1975, 43 states had state plans underway or completed. Review of these plans should be arranged directly with the appropriate state government office. About 45-50 metropolitan/regional plans are underway or have been completed under the grant program. Plans have been completed for the locations listed below. The Airport Planning Division, AAP-400, FAA, may be contacted for the name and address of the planning organizations sponsoring each metropolitan/regional plan.

Planning Area

Texas Gulf Coast
Southern California
San Francisco Bay Area
Quad Cities, Washington–Idaho
Augusta, Georgia–South Carolina
Columbus, Georgia–Alabama
Kansas City
Upper Cook Inlet, Alaska
Sacramento, California
Denver
Middle Georgia

CHAPTER IV — FORECAST DOCUMENTS

FAA AVIATION FORECASTS, FISCAL YEARS 1978-1989
DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-32, September 1977

This report contains the Fiscal Years 1978 to 1989 FAA forecasts of aviation activity and measures of workload at FAA facilities. These include airports with FAA control towers, air route traffic control centers, and flight service stations. Detailed forecasts were made for the four major users of the NAS: air carriers, air taxi, general aviation, and the military. Also contains for the first time a specific forecast for commuter airlines. The forecasts have been prepared to meet the budget and manpower planning needs of the constitutent units of FAA and to provide information that can be used by state and local authorities, the aviation industry, and general public.

Availability: NTIS, #AD A047 657
Price: $6.00

FORECASTS OF COMMUTER AIRLINES ACTIVITY
DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-28, July 1977

Assesses the potential of the commuter airline industry including the identification of those short-haul, low-density points that are likely prospects for future commuter service.

Availability: NTIS, #AD A044 804
Price: $5.25

FORECASTS OF WORLDWIDE AVIATION ACTIVITY
DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-76-18, November 1976

The level of international air traffic on a worldwide basis is analyzed for the base year of 1975 and forecast for the years 1980, 1985, and 1990. An econometric model is used to forecast flight activity using regional economic and population data and data on fuel prices and other aircraft operating costs. Other models transform these forecasts into estimates of aircraft flight hours at various altitudes over areas of the globe. A special model was devised which probabilistically assigns flight-hour activity to specific aircraft types in future years as fleet composition changes.

Availability: NTIS, #AD A039 016
Price: $7.25

IFR AIRCRAFT HANDLED—FORECAST BY AIR ROUTE TRAFFIC CONTROL CENTER, FISCAL YEARS 1978-1989
DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, Report #FAA-AVP-77-34, November 1977

Presents the forecasts of IFR aircraft handled by FAA air route traffic control centers. Serves as a base for the FAA planning and budget process in determining future requirements for facilities, equipment, and manpower. Published annually.

Availability: NTIS, #AD A049 305
Price: $5.25

MILITARY AVIATION FORECASTS—FISCAL YEARS 1977-1988
DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, Report #FAA-AVP-76-15, August 1976

This report represents forecasts of military air traffic activity at facilities operated by FAA for Fiscal Years 1977 through 1988. These data are required for planning to meet the demands which the U.S. military services will place on the National Aviation System. The report is used as a guide in determining the need for larger or additional FAA facilities, for changes or consolidations, and for increases or decreases in personnel at existing facilities.

Availability: NTIS, #AD A029 659
Price: $4.00

STATEWIDE TRAVEL DEMAND FORECASTING
DOT/Federal Highway Administration, Transmittal 147, Vol. 20, Appendix 59, November 1973

The purpose of this document is to provide a discussion of current techniques, practices, recommendations where appropriate, and areas of needed development in the field of statewide travel demand forecasting.

Availability: DOT

TERMINAL AREA FORECAST—1979-1990
DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, Report #FAA-AVP-78-6, June 1978

Contains forecasts for air carrier and air taxi enplanements, air carrier and air taxi aircraft operations, itinerant, total and instrument aircraft operations, and instrument approaches at 905 airports throughout the United States. The airports in this publication include all those with FAA air traffic control towers and those with air carrier service. The report is intended as an aid for anticipating future manpower and equipment needs at terminal areas. Published annually.

Availability: FAA

CHAPTER V — ENVIRONMENTAL CONSIDERATIONS

AIRPORT CONSTRUCTION CONTROLS TO PREVENT AIR AND WATER POLLUTION
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5370-7, April 26, 1971

Supplies guidance material on compliance with air and water standards during construction of airports developed under the Airport and Airway Development Act of 1970, as amended.

Availability: DOT

AIRPORT DRAINAGE
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5320-5B, July 1, 1970

Provides guidance for engineers, airport managers, and the public in the design and maintenance of airport drainage systems.

Availability: GPO #050-007-00149-5
Price: $1.30

AIRCRAFT ENGINE NOISE MEASUREMENT TECHNIQUES, FACILITIES, AND TEST RESULTS
William R. Morgan and Spiridon N. Suciu, General Electric Company, Cincinnati, Ohio

This paper describes three basic phases of acoustic tests and analysis work necessary to advance the state-of-the-art of quiet engine designs which, in turn, contributes to the reduction of noise emanating from aircraft. Provided is a description of types of laboratory test equipment and also important early results that may be obtained from such equipment; far field (open field) acoustic ground test facilities and test results; and finally, flight test facilities and flight results. An article in an overall symposium on Aircraft Engine Noise and Sonic Boom.

Availability: NTIS, #AD-697190
Price: $16.25

AIRCRAFT NOISE: FUGITIVE FACTOR IN LAND USE PLANNING
Journal of the Urban Planning and Development Division, #6520

Relief from severe noise exposure is obtainable through both remedial and preventive land-use planning followed by appropriate community action. Remedial planning involves programming redevelopment of occupied land to eliminate noise-sensitive uses in exposure zones. Preventive planning applies availabel methods for predicting the extent of future restrictions.

Availability: American Society of Civil Engineers
345 East Forty-seventh Strect
New York, New York 10017

AN AIRLINE VIEW OF THE NOISE PROBLEM
F. W. Polk, Journal of Air Traffic Control, 525 School Street, S.W., Washington, D.C. 20024

The mounting challenges of the noise problem to the aircraft designer, the city planner, and to airline management are discussed against a background of the noise situation at Kennedy Airport.

Availability: AIAA; Repr HC; #A68-22621

AIRPORT-LAND USE COMPATIBILITY PLANNING
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5050-6, December 20, 1977

Provides generalized guidance for compatible land use planning in the vicinity of new and existing airports. It presents techniques and ideas available for planning and achieving long-term compatibility between airports and their environs.

Availability: GPO #050-007-00417-6
Price: $2.50

AIRPORT LANDSCAPING FOR NOISE CONTROL PURPOSES
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5320-14, January 31, 1978

Guidance to airport planners and operators in the use of tree vegetation screens around airports and operating areas for noise-control purposes.

Availability: DOT

AIRPORT LOCATION—THE FACTORS INVOLVED
R. S. Douglas, Institution of Civil Engineers, London, England—September 1969

Brief outline of the various technical and operational factors involved in developing airport facilities, and discussion of their significance in airport location.

Supplemental Note: In: World Airports: The Way Ahead; Institution of Civil Engineers, Conference, London, England, September 23-25, 1969, Proceedings.

Availability: AIAA; Repr HC; #A69-40431

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY PLANS
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-13, February 1978

Briefly explains the shared responsibilities of airport operators, airport users, affected local government, FAA and citizens in the preparation of aircraft noise control plans. It includes specific actions that can be taken at the local level to reduce noise impacts and FAA responsibilities.

Availability: FAA

AIRPORT NOISE CONTROL AND LAND USE COMPATIBILITY (ANCLUC) UNDER THE PLANNING GRANT PROGRAM
DOT/FAA/Office of Airports Programs, FAA Order 5900.4, September 1977

Includes guidance on FAA funding of noise plans and emphasizes noise control actions and land use planning and control with Federal grant funds.

Availability: DOT

AIRPORT VICINITY AIR POLLUTION STUDY
Atomic Energy Commission, Argonne National Laboratory, Energy and Environmental Systems Division, for DOT/FAA/Systems Research and Development Service, Report #FAA-RD-73-113, December 1973

Describes the development of a computer model that can be used to determine the impact of an existing or planned airport on air quality in its vicinity.

Availability: NTIS, #AD/A-001564
Price: $9.25

AIR TRAFFIC GROWTH, AIRLINE FINANCES, AND PUBLIC BENEFITS IN RELATION TO THE COSTS OF NEW PROGRAMS TO ALLEVIATE JET AIRCRAFT NOISE NEAR AIRPORTS
Systems Analysis and Research Corporation, Boston, Massachusetts

Effective new programs for coping with aircraft noise around airports are discussed, including costs and means of financing such programs.

Availability: NTIS, #AD-647393
Price: Repr HC $7.25

ANALYSIS OF COMMUNITY AND AIRPORT RELATIONSHIPS/NOISE ABATEMENT
Bolt, Beranek and Newman, Inc., Van Nuys, California, #430-001-018

Contents: Predicting community response to aircraft noise; judgments of the relative and absolute acceptability of actual and recorded aircraft noise; an analysis of some factors affecting community-airport decisionmaking; the reduction of aircraft noise measured in several schools, motel, and residential rooms, computer-aided study of time patterns of noise from jet aircraft takeoffs; a study of aircraft flyover noise variations due to changes in flight paths and atmospheric sound transmission characteristics; applications of methods for rating land-use compatibility with aircraft noise.

Availability: NTIS, #AD-645955
Price: Repr HC $12.50

CALCULATION OF MAXIMUM A-WEIGHTED SOUND LEVELS RESULTING FROM CIVIL AIRCRAFT OPERATIONS
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-17, June 1978

Provides detailed guidance on assessing noise impacts in peak levels for simple noise assessment involving introduction of jet service, changes in flight tracks and other FAA actions which have noise impacts.

Availability: NTIS
Price: $6.00

CERTIFICATED AIRPLANE NOISE LEVELS
DOT/FAA Advisory Circular 36-1B, 1977

Provides information on the noise levels of specific airplanes.

Availability: DOT

CITIZEN PARTICIPATION IN AIRPORT PLANNING
DOT/FAA Advisory Circular 150/5030-4, 1975

Provides detailed guidance for involving citizens in the Planning Grant Program for airport development.

Availability: DOT

COMMITTEE ON SST-SONIC BOOM
National Academy of Sciences, National Research Council

Contents: Generation and propagation of sonic booms—the aeronautical aspects of the sonic boom problem—state of knowledge, influence upon airplane design, research needs; structural reponse—state of knowledge; physiological effects—indirect or trigger effects, disturbance of sleep; psychological response—public acceptability of the sonic boom (present status of knowledge, future testing), psychoacoustic effects (psychological acceptability), future research, legal and insurance aspects, public response.

Supplemental Note: Prepared in cooperation with Columbia University, School of Engineering and Applied Sciences, New York, N.Y.

Availability: NTIS, #AD-668948
Price: Repr HC $4.00

A COMPREHENSIVE POLICY TO AMELIORATE ADVERSE EFFECTS OF TRANSPORTATION FACILITIES

Urban Systems Research and Engineering, Inc., of Cambridge, Mass., for DOT/Ass't Secretary for Environment, Safety, and Consumer Affairs, Report #PB 247823/AS, January 1976

Addresses potential policy and legislative initiatives for such adverse impacts as noise and property value loss that detract from airport, highway, and mass transportation facilities. A separately bound appendix includes cost estimates, a report on impact definition, and an environmenal impact statement for the initiatives.

Availability: NTIS, #PB-247823 (Report) and #PB-247824 (Appendix)
Price: Report: $7.25
Appendix: $11.75

CONCORDE AIR QUALITY MONITORING AND ANALYSIS PROGRAM AT DULLES INTERNATIONAL AIRPORT

DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-77-14, December 1977

As a part of FAA's monitoring of Concorde operations at Dulles International Airport during the initial 12 months of flights there, extensive measurements of air quality and specific aircraft engine emissions were made. This report documents the results of those measurements.

Availability: NTIS
Price: $9.00

CONCORDE MONITORING SUMMARY REPORT, DULLES INTERNATIONAL AIRPORT, May 1976–May 1977

DOT/FAA/Office of Environmental Quality, September 1977

Summarizes the results of all phases of the FAA's monitoring program during the first 12 months of Concorde operations at Dulles International Airport.

Availability: FAA

DEMAND ANALYSIS FOR AIR TRAVEL BY SUPERSONIC TRANSPORT, VOLUME II, APPENDICES

Norman J. Asher, William F. Beazer, William A. Cox, Richard F. Ruth, and Walter Y. Oi for the Institute for Defense Analyses, 400 Army-Navy Drive, Arlington, Virginia

The report projects to 1990 the potential demand for a U.S. SST in competition with the British-French Concorde and examines the effects on the U.S. balance of payments of these projections and the resulting international fleet mixes. These results are given in two volumes. The present volume (Volume II) contains the appendices to the main volume (Volume I, #AD-652309).

Availability: NTIS, #AD-652310
Price: Repr HC $9.25

DOT/FAA AVIATION NOISE ABATEMENT POLICY, November 18, 1976

Sets forth Agency policy for controlling noise at the source, aircraft operational procedures, and airport noise control plans. The policy sets forth the responsibilities of the FAA manufacturers, airlines, airport operators, local governments, and affected citizens who have a role in shaping the impact of aviation noise.

Availability: NTIS, #PB-262916
Price: $5.25

ECONOMIC ANALYSIS OF TRANSPORTATION NOISE ABATEMENT

Jon P. Nelson, Ballinger Publishing Co., 1978

This book examines the benefit/cost relations of regulating aircraft noise and interstate truck noise, using noise effects on property values to measure the potential benefits.

THE EFFECTS OF NOISE ON MAN

Karl D. Kryter, Academic Press, 1970

This book provides a valuable textbook describing man's resonses to environmental noise, especially aircraft noise. The book describes the auditory system responses to noise, subjective responses to noise, and general non-auditory responses such as sleep interference, stress, and physiological reactions.

ENVIRONMENTAL ASSESSMENT OF AIRPORT DEVELOPMENT ACTIONS

DOT/FAA/Office of Airports Programs, Report #FAA-AP-77-1, March 1977; Appendix Volume, Report #FAA-AP-77-1A

This is a detailed guidance book for the preparation of environmental impact statements, negative declaration, and environmental assessment impact reports in the airport development assistance program.

Availability: NTIS, #AD A039 274
Price: $12.50

Appendix Volume: NTIS, #AD A039 465
$12.00

ENVIRONMENTAL ENHANCEMENT AT AIRPORTS—INDUSTRIAL WASTE TREATMENT
DOT/FAA/Office of Airports Programs, Advisory Circular 150/5320-10, April 16, 1973; change 1 dated November 18, 1974

Provides basic information on the nature and treatment of industrial wastes produced at airports.

Availability: DOT

ENVIRONMENTAL QUALITY—THE SEVENTH ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY, September 1976

This seventh report by the President's Council on Environmental Quality briefly but comprehensively covers the entire field of environmental concern. The report is published annually.

Availability: GPO, Stock #041-010-0031-2
Price: $3.50

FAA ENVIRONMENTAL DATA BANK
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-18, 1978

Includes information concerning noise abatement procedures, land-use controls, proprietary-use restrictions, and other environmental activities at approximately 300 of the more intensively used airports around the country.

Availability: FAA

FAA FIVE-YEAR ENVIRONMENTAL PLAN—1978-1982
DOT/FAA/Office of Environmental Quality, 1978

Contains the Agency's program for aviation noise control, air pollution control, and environmental management.

Availability: FAA

FEDERAL REGULATIONS FOR THE CONTROL OF AIRCRAFT NOISE AND SONIC BOOM, *Federal Register*, June 26, 1978

14 CFR 35, Noise Standards: Aircraft Type and Airworthiness Certification, with ten amendments (latest issued June 26, 1978); 14 CFR 91.55, Civil Aircraft Sonic Boom; 14 CFR 91.85(c), Noise Abatement Approach Procedures; and 14 CFR 91.301, Operating Noise Limits.

Availability: Federal Register
633 Indiana Avenue, N.W.
Washington, D.C.

HUMAN REACTION TO AIRCRAFT ENGINE NOISE
J. W. Little and J. E. Mabry, Boeing Company

Comparisons of field test studies by observer groups, unsolicited complaints, social surveys, and controlled laboratory studies are shown. The evolution of EPNL (effective perceived noise level) and its possible constraint on engine design and a new approach to subjective evaluations are discussed.

Availability: AIAA, Repr HC; #69-12766

IMPACT OF NOISE ON PEOPLE
DOT/FAA/Office of Environmental Quality, May 1977

This report includes technical information on the effect of noise in both "Cumulative Metrics" and single events.

Availability: FAA

MEASURED OR ESTIMATED (UNCERTIFICATED) AIRPLANE NOISE LEVELS
DOT/FAA Advisory Circular 36-2A, 1978

Provides information on the noise levels of specific airplanes.

Availability: DOT

NOISE CONTROL ACT OF 1972, PUBLIC LAW 92-574
October 27, 1972

Established Federal authorities to control major noise sources, and amended the previous authority of the FAA to regulate aircraft noise and sonic boom by adding an advisory role for the Environmental Protection Agency.

Availability: FAA

NOISE CONTROL PLANS, FAA Order 1050.11, June 9, 1977

Concerns Agency responsibilities in relation to airport proprietor noise control plans including noise abatement procedures, compatible land-use control around airports, and propriety use restrictions. It provides direction for FAA review of proprietary use restrictions and, where appropriate, assistance in development of local aviation noise abatement procedures.

Availability: FAA

PLANNING FOR THE AIRPORT AND ITS ENVIRONS: THE SEA-TAC SUCCESS STORY
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-15, April 1978

Provides a detailed description of the noise/land-use planning effort, including community participation, at the Seattle/Tacoma International Airport.

Availability: FAA

POLICIES AND PROCEDURES FOR CONSIDERING ENVIRONMENTAL IMPACTS

DOT/FAA/Office of Environmental Quality, FAA Order 1050.1B, June 16, 1977

Sets forth Agency responsibilities and procedures for compliance with the National Environmental Policy Act and sixteen other environmental laws and directives in a single administrative procedure. The order includes detailed direction on substantive environmental impacts such as noise, air quality, historical and archaeological sites. It includes an appendix for each FAA service with environmental responsibilities.

Availability: FAA

REPORT ON THE FEASIBILITY, PRACTICABILITY, AND COST OF THE SOUNDPROOFING OF SCHOOLS, HOSPITALS, AND PUBLIC HEALTH FACILITIES NEAR AIRPORTS

DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-14, July 1977

Concludes that soundproofing can achieve noise reductions of 10 to 20 db, is feasible and practicable, and may be cost-effective at specific locations.

Availability: NTIS
Price: $5.25

REPORT ON THE SPECIAL MEETING ON AIRCRAFT NOISE IN THE VICINITY OF AERODROMES

International Civil Aviation Organization, Montreal, Quebec, Canada

Report of a 1969 special international meeting of governments on the subject of aircraft noise, leading to the adoption of international aircraft noise standards. Out of this special meeting was formed the ICAO Committee on Aircraft Noise, which meets at 18-24 month intervals. Reports of these meetings cover a broad range of technical subjects dealing with aircraft and airport noise.

Availability: Department of Public Printing and Stationery, Ottawa, Ontario, Canada

RESULTS OF RECENT NASA RESEARCH PERTINENT TO AIRCRAFT NOISE AND SONIC-BOOM ALLEVIATION

Harvey H. Hubbard, Domenic J. Maglieri, and William H. Mayes; National Aeronautics and Space Administration, Langley Research Center

Brief discussion of the airport-community noise problems associated with aircraft landing and takeoff-climbout operations. Review of certain aspects of the sonic-boom problem resulting from supersonic flights.

Availability: AIAA; Repr HC; Microfiche; #A68-39219

SEADRONE—DESIGN FOR THE SUPERSONIC EAR

Leonard H. Quick, Transportation Systems Corporation

The design approach utilized in the conceptual design study of a Seadrone for the Los Angeles Department of Airports is described. The concept considers the airport, connecting transportation links, and passenger/cargo functions as related elements of a total transportation system. Four basic types of marine platforms were investigated to determine technical feasibility and operational suitability. Airport operations were analyzed by comparative PERT diagrams of passenger, cargo, and aircraft operations to determine functional priority and decentralization potential.

Availability: AIAA, Repr HC; Microfiche; #A68-44994

STANDARDIZATION OF AVIATION NOISE STRESS

I. Ya Borschevskii, V. S. Kuznetsov, and E. V. Lapaev; School of Aerospace Medicine, Brooks AFB, Texas—October 1967

The studies performed concerning the cumulative effects of noise led to the following recommended *maximum tolerable levels of noise relative to intensity* and duration with daily exposure: up to 100 decibels—6 hours; up to 110 decibles—1 hour; 115 decibels—not more than 30 minutes.

Supplemental Note: Trans. of Voenno-Meditsinskii Zhurnal (USSR) N10 P80-82, October 1967, by David L. Wood.

Availability: NTIS; #AD-691053
Price: Repr HC $4.00

THE SUPERSONIC TRANSPORT: THE SONIC BOOM AND YOU

John O. Powers and Kenneth Power; FAA

An attempt was made to outline the historical development of the United States supersonic transport development program and to place in proper perspective the national significance of the SST program. The technological aspects and problems of the sonic boom are reviewed. The actual overflight sonic boom programs to date were reviewed and capsule results discussed.

Availability: NTIS, #AD-661840
Price: Repr HC $4.50

TRANSPORTATION NOISES: A SYMPOSIUM ON ACCEPTABILITY CRITERIA
University of Washington Press, 1970

This book reports the proceedings of a three-day symposium, "Evaluating the Noises of Transportation," held at the University of Washington, in March 1969. It provides an excellent reference on the general subject of community reaction to transportation noise, and especially aircraft noise.

CHAPTER VI — COST/REVENUE IMPACTS ON TERMINAL AREA PLANNING

AIRCRAFT OPERATING COST AND PERFORMANCE REPORT
Civil Aeronautics Board, July 1975

This report presents unit cost and performance data for transport aircraft operated by the Nation's certificated route air carriers for Calendar Years 1973 and 1974. Unit operating cost and performance data for turbine aircraft operated by the U.S. supplemental air carriers in 1974 are also presented.

Availability: GPO, Stock #0306-00069
Price: $2.70

AIRPORT ACCESS/EGRESS SYSTEM STUDY
E. M. Whitlock and D. B. Sanders, Wilber Smith and Associates, September 1973, Report #DOT-TSC-OST-73-32 (Vols. I & II)

Study proposes a number of low-capital improvement concepts to airport access/egress. Presented in two volumes: Volume I includes airport and user characteristics and details on the execution of operational experiments; Volume II, an appendix volume, describes supporting data and airport master plans collected during field surveys.

Availability: Volume I, NTIS, #PB-223806
Volume II, NTIS, #PB-223842
Price: Volume I, $9.00
Volume II, $11.00

THE AIRPORT PASSENGER HEAD TAX
William R. Fromme, DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-74-1, July 1974

This report examines the financial posture of approximately 55 airports which adopted head taxes in 1973 and evaluates the impact of the tax on airport operations and development programs. Considering the financial requirement of air carrier airports, the revenue potential of the passenger head tax, and the small impact of the tax on air travel demands, this report finds no significant financial argument for maintaining the prohibition of head taxes.

Availability: NTIS, #AD/A-004308
Price: $7.25

AIRPORT QUOTAS AND PEAK HOUR PRICING: ANALYSIS OF AIRPORT NETWORK IMPACTS
William R. Fromme and William M. Swan, DOT/FAA/Office of Aviation Policy, June 1976

This report provides an evaluation of the impacts of airport quotas and peak-hour pricing on air traffic congestion and airport system delay. Undertaken by FAA in repsonse to a 1974 request by the Office of the Secretary of Transportation for a review of specific policy alternatives to the UG3rd.

Availability: NTIS, #AD A037 080
Price: $8.00

COST-BENEFIT ANALYSIS AND THE NATIONAL AVIATION SYSTEM—A GUIDE
J. Watson Noah Associates for DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-15, February 1977

This manual contains a discussion of cost-benefit methodology as it applies to the National Aviation System, as explanation of selected values for potential use in FAA studies, and the principles, concepts, and techniques appropriate to estimating benefits and life-cycle costs. In addition, parameters useful for valuing changes in capacity, delay and aviation safety are presented.

Availability: NTIS, #AD A037 434
Price: $9.25

ECONOMICS OF AIRPORT OPERATION—CALENDAR YEAR 1972
DOT/FAA/Office of Aviation Economics/Economics Analysis Division, April 1974

This study analyzes how airport operating revenues, expenses, and investment costs vary by airport size, operation, and location.

Availability: NTIS, #AD A005 892
Price: $5.25

ESTIMATION OF UG3RD COSTS

Transportation Systems Center for DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-10, January 1977

This study estimates the additional costs that would be incurred by both FAA and airport and airway users as a result of implementation of the Upgraded Third Generation Air Taffic Control System (UG3rd). Annual cost estimates are provided for engineering and development, facility and equipment expenditures, and maintenance expenses for the period 1976 through 2000. Separate cost detail is provided for the Discrete Address Beacon System, Intermittent Positive Control Automation, and the Wake Vortex Avoidance System. These components, in various combinations, have been evaluated as part of a cost-benefit analysis of the UG3rd system. In addition, certain unit costs were estimated for use in valuing potential UG3rd benefits.

Availability: NTIS, #AD A040 389
Price: $6.50

ESTIMATION OF UG3RD PRODUCTIVITY IMPACTS

DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-4, January 1977

This study estimates the value of savings attainable from reduced Air Traffic Service staff requirements associated with implementation of the Upgraded Third Generation Air Traffic Control System (UG3rd). Presents a synthesis of research results on air traffic control and productivity performed under FAA research contracts with Stanford Research Institute and METIS Corporation.

Availability: NTIS, #AD A036 772
Price: $5.25

GENERAL AVIATION COST IMPACT STUDY

Battelle-Columbus, Columbus, Ohio, for DOT/FAA/Office of Aviation Economics, June 1973.

This report, prepared in four volumes, constitutes an analysis of the effects of ownership and operating cost changes on activities within general aviation.

Availability: FAA

GENERAL AVIATION DYNAMICS, AN EXTENSION OF THE COST IMPACT STUDY TO INCLUDE DYNAMIC INTERACTIONS IN THE FORECASTING OF GENERAL AVIATION ACTIVITY

DOT/FAA/Office of Aviation Policy/Aviation Forecast Branch, Report #FAA-AVP-77-20, April 1977

This final report, in four volumes, presents the General Aviation Dynamics (GAD) model which was developed for FAA by Battelle-Columbus Laboratories. The GAD model is a dynamic simulation model of the general aviation system and can be used to forecast GA activity, evaluate alternative policy actions, or perform sensitivity analyses. The volumes included in the report are:

Volume I: Executive Summary
Volume II: Research Methodology
Volume III: Planning Guide
Volume IV: Data Base

Availability: Volume I: NTIS, #AD A039 807
Volume II: NTIS, #AD A039 839
Volume III: NTIS, #AD A039 911
Volume IV: NTIS, #AD A039 808
Price: Volume I: $3.50
Volume II: $7.50
Volume III: $4.00
Volume IV: $5.00

LIST OF PUBLIC AIRPORTS AFFECTED BY AGREEMENTS WITH THE FEDERAL GOVERNMENT (RIS: AS 5190-FFS-1)

DOT/FAA/Office of Airports Programs, Order 5190.2J, May 13, 1976

This order records, by FAA regions and states, those public airports affected by agreements with the Federal Government.

Availability: FAA

POLICY ANALYSIS OF THE UPGRADED THIRD GENERATION AIR TRAFFIC CONTROL SYSTEM

William R. Fromme and John M. Rodgers, DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-3, Final Report, January 1977

Provides a review of costs and benefits of the Upgraded Third Generation Air Traffic Control System from a systems perspective and also reviews the feasibility and effectiveness of complementary policy strategies.

Availability: NTIS, #AD A037 801
Price: $7.25

POTENTIAL CLOSURE OF AIRPORTS
DOT/FAA/Office of Airports Programs, January 1978

Report to Congress discusses the problems faced by private owners of public-use airports. Problems such as high taxes and operating expenses are examined and their prevalence described by location and FAA region. Data are presented for 120 potentially endangered airports.

Availability: DOT

PRELIMINARY LIMITED SURVEILLANCE RADAR (LSR) COST/BENEFIT ANALYSIS
Paul S. Rempfer, Transportation Systems Center for DOT/FAA/Office of Aviation System Plans, Report #FAA-ASP-77-10, October 1977

Presents the findings of a cost/benefit analysis of the deployment of a new Limited Surveillance Radar (LSR). The study is preliminary in that it is brief and uses rough estimates and assumptions for both benefits and costs. Its purpose is to give a gross estimate of the current deployment potential of the LSR and to aid in decisions regarding further system analysis, development, and testing.

Availability: NTIS, #AD A046 829
Price: $5.25

CHAPTER VII — MODELS

Airport Aircraft Delay Models — Introduction

There are basically two types of models for predicting aircraft delay due to congestion on the airport runways in current use: (1) discrete event simulation models, in which the movement of each aircraft is simulated, and (2) analytic models, in which conditions during specific time periods (usually an hour, each) are used to estimate the delay conditions during the period based either on relationships derived from prior runs of discrete event simulation models ("empirically"-based) or on relationships derived mathematically (theoretically-based). Discrete-event simulation models should be capable of greater accuracy due to their greater detail but because of their large input data requirements and long running times, they are useful for considering only a rather limited set of possible conditions. Analytical models involve a higher level of approximation, but, because of their efficiency, can be used to analyze a variety of conditions representative of those experienced over an extended period.

The quickest way to compare the capabilities of the various models is to compare their inputs and outputs. To select the delay model that provides the appropriate analysis, a comparison of the inputs and outputs of these seven models is outlined in Figure I. The major input data requirements considered by the models are as follows:

1. Aircraft demand is the total number of aircraft operations over a period of time. Models designed to simulate conditions over an entire year consider annual demand. Models designed to simulate conditions over a number of hours accept demand data each hour. The demand can be stated explicitly (i.e., specific flights at specific times) or by given distributions of hourly demand and an assumed distribution (usually Poisson) for inter-hour demand. Some models, such as the MIT MITASIM can be used either way.

2. Demand mix denotes the number of operations in each category. The aircraft are categorized by weight and performance characteristics and FAA separation standards are specified by category. Operations can be further categorized as arrivals or departures. Some models permit (or require) categorization of operations on each runway. The latter can take the form of different mix of aircraft or different percentages of operations assigned to each runway. One model requires the runway used for each operation to be stated in advance.

3. ATC separation rules are usually represented by a matrix of separation requirements (which might be in time or distance). The MIT DELAYS Model does not consider these requirements explicitly but does consider a distribution of time required for each operation which implicitly includes the effect of various separation requirements. Procedures regarding whether or not arrivals have preference over departures range from first-in, first-out (no preference) to complete preference for arrivals.

4. All of the models consider the impact of IFR ceiling and visibility conditions. None of them consider the impact of precipitation or wind. For discrete event simulation models, the presence or absence of IFR conditions is specified for the run. For analytic models, the percent of time IFR conditions obtain is usually specified.

5. The extent to which airspace congestion in the vicinity of the runways is considered varies from model to model. Congestion on the final approach path is usually considered but traffic volume in the air terminal area is usually not considered.

6. The runways are described in varying detail. All models are restricted to some extent in the configurations considered but some are restricted to only one or two possibilities. The exits used are generally specified by percent of operation. The MIT DELAYS Model does not consider exits explicitly but does consider the distribution of service time which is a function of exit usage.

7. Some models require runway capacity as an input which requires the exercise of another model. Others go directly from airport conditions to an estimate of delay. Since capacity is a function of many variables, reduction of these effects to a single set of numbers can introduce some error.

The delay predictions produced by the models vary in depth and breadth. Discrete event simulation models have the capability of predicting the delay for each operation. Some analytic models have the capability to produce an estimate of the average delay per operation over the course of the day.

FIGURE I

FACTORS CONSIDERED BY VARIOUS DELAY MODELS

Factor Type of model:	PM+M Airfield Sim Discrete event simulation	PM+M Annual Delay Analytical/ empirical	MIT MITASIM-1 Discrete event simulation	MIT MITASIM-2 Discrete event simulation	MIT Delays Analytic/ theoretical	L+B AIRSIM Discrete event simulation	TSC APM Discrete event simulation
Demand:							
Annual demand	No	Yes	No	No	No	No	Yes
Daily demand	No	Distribution	No	No	Yes	No	Uses OAG to
Hourly demand	Specific	Typical day	Yes	Specific	Yes	Specific	develop de-
Inter-hour demand	Specific	Peaking factor	Distribution	Specific	Distribution	Specific	mand times
Demand Mix:							
A/C type mix	Specific	Distribution	Distribution	Specific	Service time	Specific	Distribution
Arrival vs. departure	Specific	Constant	By hour	Specific	Constant	Specific	Specific
Runway specific	Specific	Distribution	No	No	No	Specific	No
Runway used	Specific	Distribution	No	No	No	Semi-dynamic	No
ATC Equipment/ Procedures:							
Separation rules	Mix combin.	Mix combin.	Mix combin.	Mix combin.	Service time	Mix combin.	Capacity
Precedence rules:	Arrival priority *subject to* departure queue size	Arrival priority *unconditional*	Arrival priority *unconditional*	Arrival priority unconditional	FIFO	Arrival priority unconditional	
Weather:							
Ceiling/ visibility	Specific	Distribution	Service time	Service time	Service time	Specific	Distribution
Precipitation	No	No	No	No	No	No	No
Wind	No	No	No	No	No	No	No
Airspace:							
Volume constraints	No	No	No	No	No	Yes	No
Approach streams	Preprocessor	No	No	No	No	Yes	No
Length of approach path	Yes	Yes	Yes	Yes	No	Yes	No
Holding stacks	No	No	No	No	No	Yes	No
Runways:							
Configuration	Flexible	Flexible	Single crossing	Single crossing	Single rwy.	Flexible	Flexible
Configuration usage	Specific	Distribution	No	No	No	Specific	One only
Exits used	Distribution	Distribution	Distribution	Distribution	Service time	Distribution	No
Taxiways and Gates	Optional	No	Yes	Yes	No	No	Post processor
Capacity estimates:	Not required	Required IFR/VFR *each*	Not required *in lieu* service time	Not required *in lieu* service time	Required Arr/Dept.	Not required	Required IFR/VFR
Delay Predictions:							
Per operations	*Specific/avg.*	*Avg./Dist.*	*By hour*	*By hour*	*Avg.*	*Avg./Dist.*	Yes
Total annual	No	Yes	No	No	No	No	Yes
Peak delay	Yes	Distribution	Yes	Yes	Yes	Yes	Hourly distrib.
Daily delay	Total	Distribution	Total	Total	Total	Total	Yes

MODELS

ADVANCED PRODUCTIVITY ANALYSIS METHODS FOR AIR TRAFFIC CONTROL OPERATIONS

Stanford Research Insitute for DOT/FAA/Systems Research and Development Service, Report FAA-RD-76-164, December 1976

This report gives a description of the ATC productivity analysis methods developed, implemented, and refined by the Stanford Research Institute under the sponsorship of FAA and the Transportation Systems Center. Two models are included in the productivity analysis methodology. The first is the Relative Capacity Estimating Process (RECEP) that models the traffic handling capabilities of individual ATC sectors in terms of routine, surveillance, and conflict-processing workloads. The second model is the Air Traffic Flow (ATF) Model that stimulates a multisector ATC network by tracing aircraft flows from sector to sector and measuring traffic loadings, workload requirements, and delays under given sets of traffic input parameters and congestion-relief strategy.

Availability: NITS, #AD A035 095
Price: $9.00

AIRPORT FACILITY QUEUING MODEL VALIDATION

Prepared by Transportation Systems Center for DOT/FAA/Office of Systems Engineering Management, Report #FAA-EM-77-4, May 1977

Criteria are presented for selection of analytic models to represent waiting times due to queuing processes.

Availability: NTIS
Price: $4.50

AIRPORT IMPROVEMENT TASK FORCE DELAY STUDY: DATA COLLECTION, REDUCTION AND ANALYSIS

DOT/FAA/Office of Systems Engineering Management, Report #FAA-EM-78-7, November 1977

A plan is presented for the collection, reduction, and analysis of data in support of the validation of an airside delay simulation model.

Availability: NTIS
Price: $5.25

AIRPORT IMPROVEMENT TASK FORCE DELAY STUDY: DELAY MODEL VALIDATION PLAN

DOT/FAA/Office of Systems Engineering Mangement, Report #FAA-EM-77-17, August 1977

A validation plan is presented for an airside simulation model. The plan stresses basic principles of validation and inherent problems associated with comparing simulation model delay estimates with observable real-world data.

Availability: NTIS, #AD A048 112
Price: $5.25

THE AIRPORT NETWORK FLOW SIMULATOR

Transportation Systems Center for DOT/FAA/Office of Aviation System Plans, Report No. FAA-ASP-75-6, May 1976

Because the impact of investment at an individual airport is felt throughout the National Airport System by reduction of delays at other airports in the system, a GPSS model was constructed to simulate the propagation of delays through a nine-airport system. The model is largely based on, and calibrated to, scheduled air carrier itineraries through the system. It calculates statistics and costs for landing, takeoff, and gate arrival delays.

Availability: NTIS, #AD A025 740
Price: $6.00

THE AIRPORT PEFORMANCE MODEL

Transportation Systems Center for DOT/FAA/Office of Aviation System Plans, Report No. FAA-ASP-75-5, April 1976

This report describes the development of a model and companion data base for evaluating levels and qualities of service provided to the public by air carrier airports. The model is designed to translate changes in airport capabilities into public service via data describing the characteristics of demand at individual airports. The model is sensitive to airport saturation capacities, aircraft mix, time distribution of demand, airport weather, and data describing passenger movements such as load factor, through passenger, and transfer passenger descriptions.

Availability: NTIS, #AD A025 262
Price: $9.25

ALTERNATIVE APPROACHES FOR REDUCING DELAYS IN TERMINAL AREAS

DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-67-70, November 1967

This staff study presents alternative approaches, regulatory and technical, to reducing aircraft delays in terminal areas. Delays and benefits versus cost were examined for runway, taxiway, and ILS improvements; new airports; air traffic control procedural changes; automation of the final approach control function; and reduction of schedule peaks. The specific airports studied were Kennedy International, LaGuardia, Newark, Washington National, Chicago O'Hare, Los Angeles, San Francisco and Oakland.

Availability: NTIS, #AD 663 089
Price: $7.25

BASIC USER'S GUIDE FOR THE FAA INTEGRATED NOISE MODEL (VERSION I)
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-01, January 1978

Delineates the process to use the Integrated Noise Model (INM) to predict noise impacts of aircraft operations at selected points or in contours of equal noise exposure. Both "cumulative metrics" and time above specified noise levels are described by the model.

Availability: NTIS, #AD A052 790
Price: $6.50

THE FAA INTEGRATED NOISE MODEL (VERSION I)
DOT/FAA/Office of Environmental Quality, Report #FAA-EQ-78-02, April 1978

Describes the FAA's model for assessing and describing the impact of aircraft noise, including how the model can be used in environmental assessments and noise planning, as well as other activities.

Availability: NTIS

THE FAA'S AIRPORT LANDSIDE MODEL: ANALYTICAL APPROACH TO DELAY ANALYSIS
DOT/FAA/Office of Aviation Policy, Report No. FAA-AVP-78-2, January 1978

Computer-implemented analytic models have been developed which will assist in the quantitative assessment of the adequacy of the airport landside; that is, the portion of the airport property not utilized by aircraft. The primary measures of adequacy are passenger delay and processing time. Detailed analytic models have been derived using queuing theory for those airport landside components which are essential to passenger processing. Also, a landside analysis program has been developed to quantify airport landside delay and capacity.

Availability: NTIS, #AD A051 145
Price: $6.50

FORECASTING MODELS FOR AIR FREIGHT DEMAND AND PROJECTION OF CARGO ACTIVITY AT U.S. AIR HUBS
Report #FAA-AVP-77-2, Transportation Systems Center for DOT/FAA-Office of Aviation Policy, January 1977

This publication contains two study reports on air cargo: Report 55-211-U1-4, "Projection of Cargo Activity at U.S. Air Hubs," and Report 55-211-U1-5, "Forecasting Models and Forecasts of U.S. Domestic and U.S. International Air Freight Demand."

Availability: NTIS, #AD A037 383
Price: $9.00

A METHODOLOGY FOR EVALUATING THE CAPACITY OF AIR TRAFFIC CONTROL SYSTEMS
Stanford Research Institute for DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-70-69, October 1970

This report describes results obtained in the first year of a multiyear project to develop a methodology for evaluating the capacity of air traffic control systems. The meaning of capacity in an ATC system and the relationship of capacities of functional and geographical system elements to system capacity measures is qualitatively analyzed. Capacity is defined in terms of aircraft movement numbers and rates as limited by a number of factors, including safety and performance. The results are reported of a first-time flight-path simulation of a future Chicago terminal area, demonstrating the use of one member of the family of models. Also reported are the experimental results of a congestion propagation simulation developed during the year.

Availability: NTIS, #AD 716 625
Price: $9.00

MODELS FOR RUNWAY CAPACITY ANALYSIS
Dr. Richard M. Harris, MITRE Corporation, for DOT/FAA, Report FAA-EM-73-5, December 1972

Examines a family of mathematical and simulation models for the calculation of single runway IFR capacity. The basic statistical model can be used to calculate capacity under arrival only and mixed arival/departure operations.

Availability: NTIS, #AD-760637
Price: $7.25

O'HARE DELAY TASK FORCE STUDY
Federal Aviation Administration/Great Lakes Region, Report No. FAA-AGL-76-1, II, July 1976

This joint FAA/City of Chicago/airline study of air traffic delay at Chicago O'Hare International Airport is presented in three volumes. The first volume is an executive summary of the study findings and recommendations. The second volume is the technical report, covering the findings, conclusions and documentation of the data and methodology utilized in the study. The third volume consists of appendices which contain data and explanatory materials.

This study of air traffic delay at O'Hare, its causes and potential solutions, outlines a comprehensive program of delay reduction measures that have the potential to dramatically reduce the level and cost

of delay. The study also quantifies benefits of elements of the upgraded third generation air traffic control system.

Availability: Vol 1 — Executive Summary — NTIS, #AD A030 237
Vol. 2 — Technical Report — NTIS, #AD A030 172
Technical Appendices — NTIS, #AD A030 305
Price: Vol. 1 — $4.50
Vol. 2 — $9.50
Technical Appendices — $9.00

PERFORMANCE MEASUREMENT SYSTEM FOR MAJOR AIRPORTS

DOT/FAA/Air Traffic Service/Operations Research Branch, November 1975

The objective of the Performance Measurement System (PMS) development effort is to develop a system to routinely evaluate ATC system performance at major terminals where user demand pushes airport capacity.

Availability: FAA

PMM&CO. AIRFIELD SIMULATION MODEL USER'S MANUAL, APPENDIX A

DOT/FAA/Office of Systems Engineering Management, September 1976

This user manual for the PMM&Co. airfield simulation model is structured to provide several levels of detail ranging from that required for upper-management personnel to computer programmers. The PMM&Co. airfield simulation model, in its present form, is based on the model developed for the Federal Aviation Administration under contract DOT FA72WA-2897.

Availability: FAA

PROCEDURES FOR DETERMINATION OF AIRPORT CAPACITY

Prepared by McDonnell Douglas Corp. for DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-73-11 (Volume 1), April 1973

This effort was divided into three major areas: (1) Airport Planning Studies was a user-oriented effort to define the requirements for planning tools. (2) Data Collection involved gathering of operational information relating to airfield performance at fourteen U.S. airports. (3) Models for determining airfield capacity and delay were also developed. For computational efficiency it was decided to use analytical techniques for capacity determination. However, the delay model necessarily had to use Monte Carlo Simulation, and the appropriate logic was developed.

Availability: NTIS, #AD 763 593
Price: $9.00

SUMMARY OVERVIEW OF THE AIRSIM MODEL, VOLUME 1

Prepared by Landrum & Brown, A Division of Booz, Allen & Hamilton, Inc., for the City of Chicago Department of Aviation, July 1976

The purpose of this document is to present a general description of the airspace/airfield simulation model (AIRSIM). Volume 1 is one of five volumes which together completely describe the model and all associated software. Although AIRSIM was constructed to simulate airspace/airfield operations within the Chicago terminal area airspace, it is a general purpose model, applicable to any airspace/airfield system. The model was recently employed by the O'Hare Delay Task Force in completing an eighteen-month study of alternate air traffic control procedural options, airport use policy options and facility development options for reducing delays in Chicago.

Availability: FAA

SUPPORTING DOCUMENTATION FOR TECHNICAL REPORT ON AIRPORT CAPACITY AND DELAY STUDIES

DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-76-162, June 1976

This report contains technical data to supplement the report "Technical Report on Airport Capacity and Delay Studies." The report contains supporting documentation of the technical studies leading to the preparation of an airfield capacity and delay handbook for the Federal Aviation Administration.

Availability: NTIS, #AD A032 526
Price: $5.25

TECHNICAL REPORT ON AIRPORT CAPACITY AND DELAY STUDIES

DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-76-153, June 1976

Contains documentation of the technical studies leading to the preparation of an airfield capacity and delay handbook for the Federal Aviation Administration.

Availability: NTIS, #AD A032 166
Price: $8.00

TECHNIQUES FOR DETERMINING AIRPORT AIRSIDE CAPACITY AND DELAY

DOT/FAA/Systems Research and Development Service, Report No. FAA-RD-74-124, June 1976

Contains procedures for determining the capacity of the airfield and its components and for determining delays to aircraft operating on the airfield. The report is structured to permit the user to choose the method of analysis most suited to the complexity of the user's problem or the level of detail desired.

Availability: NTIS, #AD A032 475
Price: $9.00

TERMINAL AREA AIR TRAFFIC CONTROL SIMULATION, FINAL REPORT

Prepared by the Aerospace Corporation, Transportation Group Directorate, Energy and Transportation Division, for National Aeronautics and Space Administration/Ames Research Center, Contract No. NAS 2-6473, June 1977

NASA has undertaken the development of a capability designed to permit them to analyze the extent and severity of interactions occurring in terminal airspace. NASA thereby expects to attain a more complete understanding of the need for advanced aircraft and flight control systems, designed to better cope with the terminal area environment by increasing total airside capacity, decreasing delays experienced by arriving aircraft, and decreasing energy usage by aircraft maneuvering to a landing. This model is intended to strike a balance between the conflicting requirements of realism and complexity, on the one hand, and speed of computation on the other. In a simulation, the level of detail, complexity and sophistication of the individual models is limited only by the power and speed of the computer available, the resources which can be devoted to model development and debug of the resulting giant computer program, and the extent of the validation effort to determine if the end product really does replicate the modeled events.

Availability: FAA

CHAPTER VIII — GENERAL

THE AIRPORT
Edward G. Blankenship, 1974

Deals with the airport terminal as a passenger-handling facility. Includes development and history of the airport, planning, accessibility factors, ecological considerations, the airport urban interface, terminal sizing, airspace, and future trends. The book contains drawings and photographs of terminals at 21 airports in the United States and Europe with discussions of their designs.

Availability: Praeger Publishers, New York-Washington (Published in 1974 in English and German, side-by-side text)

AIR TRAFFIC CONTROL
DOT/FAA/Air Traffic Service, Handbook 7110.65A, January 1, 1978

This handbook prescribes air traffic control procedures and phraseology for use by personnel providing air traffic control services.

Availability: GPO, Stock #050-007-91609-4
Price: $16.00/year (Subscription)

AN ANALYSIS OF CONTINUED OPERATION OF SELECTED AIRPORT TRAFFIC CONTROL TOWERS (ATCT)
DOT/FAA/Office of Aviation System Plans, Report #FAA-ASP-77-6, June 1977

Evaluates the merits of continued operation of existing FAA airport traffic control towers using the benefit-cost technique. Considered are airport safety and efficiency benefits as well as the costs of continued facility operation and of dismantling and relocation.

The study is divided into three parts. Part A describes the detailed benefit-cost rationale and methodology. Part B provides an historical account of the evolution of tower establishment and discontinuance criteria. Part C examines the impact of uneconomical tower locations identified by the benefit-cost analysis, i.e., those sites where costs of continued tower operation exceed benefits. This part also offers several alternative options for formulating an Agency policy for discontinuing tower operations.

Availability: FAA

ANALYSIS OF DUAL LANE RUNWAYS
Carl T. Ball, DOT/FAA/Systems Research and Development Service, Report #FAA-RD-73-97, March 1974

The purpose of this technical report is to provide supporting detail for the Dual-Lane Runway Committee Report and to combine and summarize the Lincoln Laboratory and Systems Research and Development Service analytical studies on dual-lane runways under the headings of design, location, and operation.

Availability: NTIS, #AD-777914
Price: $5.25

BIBLIOGRAPHY: AIRPORTS
Prepared by Transportation Research Board, National Academy of Sciences, for DOT/FAA/Office of Systems Engineering Management, Report No. FAA-EM-77-15

This bibliography was prepared to illustrate input-output procedures that have been proposed for the implementation of an Air Traffic Research Information Service (ATRIS). The proposed subject scope for ATRIS covers 21 areas that range from aircraft to travel and tourism. The bibliography has 10 chapters on major aspects of airports, including access, environmental impact, planning and design, safety and security, operations, and management. It contains nearly 800 references that represent initial input to the machine-readable ATRIS data base. The implementation plan calls for extending the data base to full coverage of all subject areas and to provide both on-line and off-line services to the air transport community. A major purpose of the bibliography is to inform ATRIS users of the services that might be provided and, through feedback from recipients of the bibliography, to learn more about the needs and wants of users of air transport information.

Availability: NTIS, #AD A049 879
Price: $8.00

FAA GLOSSARY
DOT/FAA, Order 1000.15A, December 18, 1975

This glossary provides standard definitions for many terms and abbreviations commonly used in the Federal Aviation Administration.

Availability: DOT

LOCATION IDENTIFIERS
DOT/FAA/Air Traffic Service, Order 7350.4L (Current edition)

This handbook lists the airports, weather stations, and navigation aids location identifiers authorized by the Federal Aviation Administration, Department of the Navy, and Canadian Ministry of Transport. It lists United States airspace fixes and procedure codes. The handbook also includes guidelines for requesting identifiers and procedures for making assignments.

Availability: GPO (on subscription basis only) Stock No. TD 4.310
Price: $18.00

SATELLITE AIRPORTS: ANALYSIS OF DEVELOPMENT POTENTIAL
William R. Fromme, DOT/FAA/Office of Aviation Policy, Report #FAA-AVP-77-6, Final Report, June 1976

Provides an analysis of the potential for developing satellite, or secondary, airports in major metropolitan areas and an estimate of the benefits satellite airport development might provide.

Availability: NTIS, #AD A036 893
Price: $7.25

SPECIAL MILITARY OPERATIONS
DOT/FAA/Air Traffic Service, Order 7610.4D, April 1975

This handbook specifies procedures for air defense activities in the air traffic control service and other special military operations and services provided by air traffic control.

Availability: FAA

INDEX

CHAPTER VIII — GENERAL